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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,080	03/06/2002	Gerard E. Parker	12872-39714	1523
7590 04/12/2004 C John Brannon, Bingham McHale LLP 2700 West Market Street Indianapolis, IN 46204-4900			EXAMINER FIORILLA, CHRISTOPHER A	
			ART UNIT	PAPER NUMBER

1731

DATE MAILED: 04/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,080

Applicant(s)

PARKER, GERARD E.

Examiner

Christopher A. Fiorilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 18-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1. Applicant's election without traverse of Group I in Paper dated 1/20/04 is acknowledged.

2. Claims 18-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in Paper dated 1/20/04.

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it contains language which may be implied (i.e. "The present invention includes..."). Correction is required. See MPEP § 608.01(b).

5. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite in that step g) recites "removing...organic material from the green body" but there is no reference to the addition of organic material.

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Claim 4 is indefinite in that the phrase “wherein about 2 weight percent” does not appear to be complete.

Claim 7 is indefinite in that steps k) and l) refer to mixing and forming the “alumina precursor”, however the claim previously recites adding a cation source to the precursor. Thus claim 7 should be amended to recite that the mixture or cation added precursor is mixed and formed.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1,3,5,6,7,8,9,10,11,14,16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eddy et al. (4,052,538).

Eddy et al. teaches the basic claimed process. The process disclosed by Eddy et al. includes the steps of:

- providing an alumina powder precursor (col. 2, line 13-14);
- adding water to the alumina powder precursor (col. 2, line 13-14);
- adding water soluble magnesia powder precursor to the alumina powder precursor (col. 2, lines 30-32);
- mixing the aqueous green powder precursor (col. 2, line 39);

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drying the aqueous green powder precursor to obtain a green powder (col. 2, line 45);
pressing a green body from the green powder (col. 2, line 59);
removing residual moisture form and organic material from the green body (col. 2, line 63); and

firing the green body (col. 2, lines 65-66).

Eddy et al. also discloses firing by passing through a hot zone (col. 4, lines 30-34).

It is well known in the art to mold ceramics by either pressing or slurry casting. It would have been obvious to one skilled in the art at the time of the invention to slurry cast the material of Eddy et al. in view of the teaching that the material may be pressed or “otherwise shaped” (col. 2, line 59).

In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

When the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). See MPEP 2112.01.

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8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eddy et al. (4,052,538) as applied to claims 1,3,5,6,7,8,9,10,11,14,16 and 17 above, and further in view of Hashimoto et al. (2004/0049045).

Hashimoto et al. discloses that magnesium carbonate is an inorganic salt. See paragraph [0179]. It would have been obvious to one skilled in the art at the time of the invention to use magnesium carbonate in the process of Eddy et al. in view of the generic disclosure therein.

9. Claims 4,12,13 and 15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach or suggest a process for producing a high alumina body as substantially set forth in the claim including:

adding a 3 percent aqueous solution of carboxymethylcellulose, wherein the green body is fired in air, wherein about 2 weight percent water soluble magnesia powder precursor is added and wherein mixing is accomplished by wet ball milling with alumina media;

wherein the substantially non-vitreous high alumina body is part of a metal matrix composite, wherein the metal can be alumina; or

wherein the alumina precursor is fired by passing through a hot zone under quasi-weightless conditions.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is (571) 272-1187. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher A. Fiorilla
Primary Examiner
Art Unit 1731

caf